

FIG. 14—A TBA820M USED AS A LOW-POWER audio amplifier.

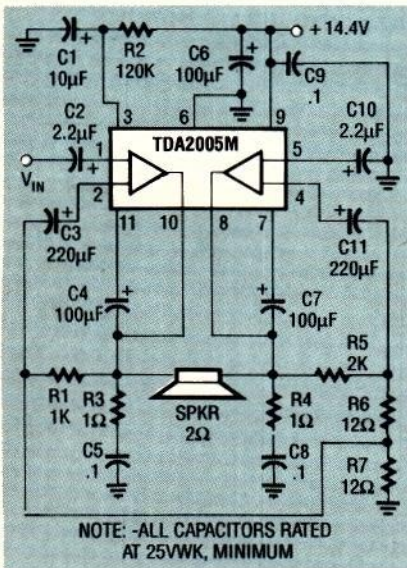


FIG. 15—A TDA2005M USED AS A 20-WATT AUTOMOTIVE audio-power booster.

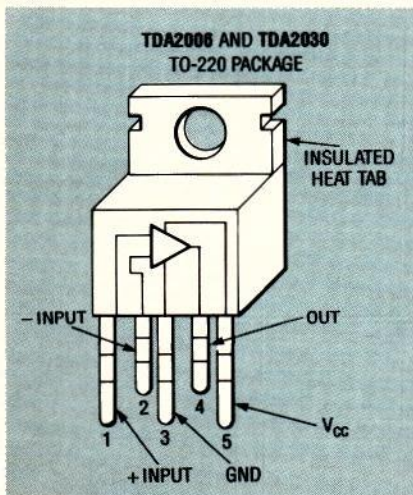


FIG. 16—THE TO-220 OUTLINE AND PIN CONNECTIONS of the TDA2006 and TDA2030.

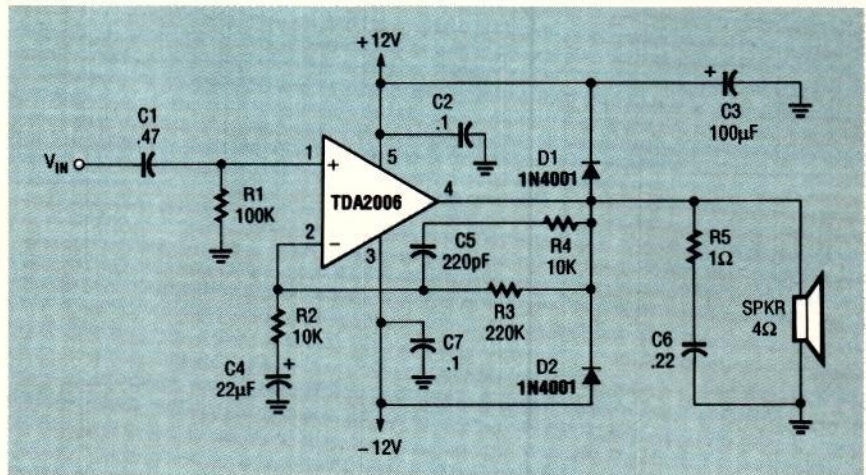


FIG. 17—A TDA2006 USED AS AN 8-WATT AMPLIFIER using a split power supply.

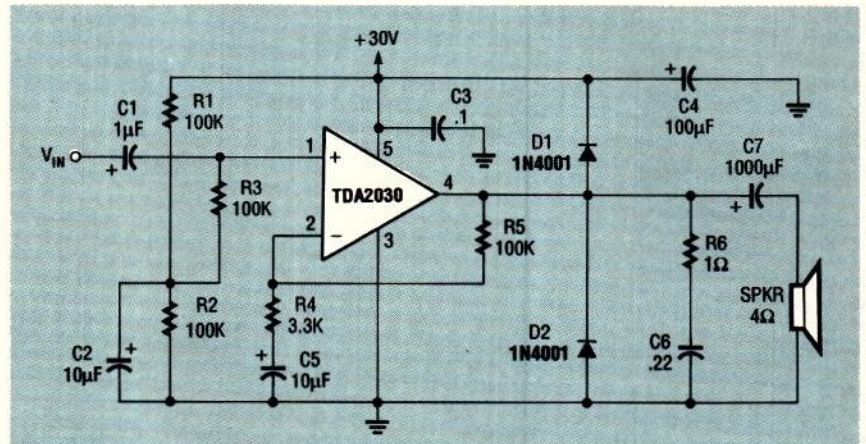


FIG. 18—A TDA2030 USED AS A 15-WATT AMPLIFIER using a single-ended power supply.

is achieved via R4-C5, and the gain is set by R3/R2, or 22. Diode D1 and D2 protect the output against damage from back-EMF from the speaker, and R5 and C6 form a Zobel network.

The TDA2030 is an upgraded TDA2006 housed in a 5-pin TO-220 package with insulated heat tab. It can

use up to +36 volts in the case of a single-ended power supply, and  $\pm 18$  volts in the case of a split power supply. Using a +28-volt single-ended power supply, it delivers 12 watts into a 4-ohm speaker or 8 watts into an 8-ohm speaker, with a THD of 0.05% at 1 kHz and 7 watts out.

Figure 18 shows an application of the TDA2030 as a 15-watt amplifier using a +30-volt single-ended power supply and 4-ohm speaker, with 30 dB gain.

The performance that you can obtain from the circuits presented can be quite impressive. While they form an excellent starting point for an original amplifier design, they can also be used in other projects. For example, with a hand-full of parts and a little bit

of work, you can transform the output of your personal portable stereo into car-filling sound.

If you have an older car stereo (and who doesn't?) with blown final output amplifiers, you might find that many of the circuits we presented will fill the bill nicely.

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